



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,467	04/12/2006	Shinichi Kaga	2006-0526A	3223
513 7590 05/12/2009 WENDEROTH, LIND & PONACK, L.L.P. 1030 15th Street, N.W., Suite 400 East Washington, DC 20005-1503				
EXAMINER				
COX, ALEXIS K				
ART UNIT		PAPER NUMBER		
3744				
MAIL DATE		DELIVERY MODE		
05/12/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/575,467

Applicant(s)

KAGA ET AL.

Examiner

ALEXIS K. COX

Art Unit

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SG/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 28, 29, 34, and 36-37 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Lee et al (US Patent No. 5,921,095) in view of Viegas (US Patent No. 6,062,030).

Regarding claims 28, 29, 34, and 37, Lee et al discloses a refrigerating storage cabinet including a heat insulating housing (5, see column 1 lines 42-45; 12, see column 4 lines 51-52 and column 5 lines 12-14), a compressor (6, see column 4 line 35; see also column 1 line 29), and a condenser, expanding mechanism, and evaporator are inherently present in the closed system of Lee et al. Lee et al further discloses a control means (16, 17, see column 5 line 50; see also figure 6) storing a plurality of refrigerating specifications (see column 6 lines 16-24), at least one for refrigerating and one for freezing, and operating the refrigerating equipment according to the specifications stored. It is noted that Lee et al does not explicitly state the use of a time-varying change mode of dropping of a physical amount with respect to refrigeration, the physical amount including an internal temperature of the heat insulating housing; more specifically, Lee et al does not explicitly perform pull-down cooling and control refrigeration according to the internal temperature monitored. The programming concept of pull-down cooling in a multi-compartmented refrigerated space is well known in the art, as is demonstrated by Viegas (see column 3 lines 23-29), and as such it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the pull-down cooling of Viegas in the system of Lee et al in order to provide better temperature control within the refrigerator/freezer in question.

Regarding claim 36, Lee et al discloses the plurality of refrigerating specifications to include a refrigerating specification for refrigeration and a refrigerating specification for freezing (see column 5 line 51).

Further regarding claim 37, the applicant is reminded that a recitation with respect to the manner in which an apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the structural limitations of the claims.

Claims 30-35 and 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al (US Patent No. 5,921,095) and Viegas (US Patent No. 6,062,030), in view of Valence et al (US Patent No. 5,600,966).

Regarding claim 30, it is noted that Lee et al and Viegas do not explicitly disclose the presence of a condensation-preventing heater with variable heating performance located about an opening of the heat insulated housing or a switching device provided to switch the variable heating performance of the heater to correspond to the appropriate one of the plurality of refrigerating specifications. Valence et al discloses the presence of a condensation-preventing heater (46, see column 3 lines 38-43) with variable heating performance (46, 48, see column 4 lines 44-47) and located about an opening of the heat insulated housing, and the control unit of Lee et al (16, 17, see column 5 line 50; see also figure 6) is capable of controlling the heating element of Valence. Further, as the function and structure of Lee et al, Viegas, and Valence et al are similar, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the condensation preventing heater of Valence et al in the

system of Lee et al and Viegas to prevent excess condensation, as stated in column 3 line 43 of Valence et al.

Regarding claim 31, Lee et al discloses an identifying means (see column 6 lines 4-16; see also figures 11 and 12) for identifying the refrigerating specification of the heat insulating housing to which the refrigeration unit is detachably attached (14, 15, see column 5 lines 41-48), and the control means selects and executes the appropriate one of the plurality of refrigerating specifications based on an identification signal from the identifying means (see column 6 lines 4-24).

Regarding claims 32, 38, and 39, the identifying means of Lee et al includes a detecting portion (microcontroller 16) provided on one of the refrigeration unit or the heat insulating housing, and a detected portion (switches 40, see column 6 lines 4-15) provided on an other of the heat insulated housing or the refrigeration unit, wherein an interaction between the detecting portion and the detected portion determines the identification signal (see column 6 lines 4-15; see also figure 12).

Regarding claim 33, Lee et al discloses the refrigerating storage cabinet to comprise a set internal temperature input section for inputting a set internal temperature for the heat-insulating housing (16, 17, see column 5 line 50; see also figure 6) wherein the identifying means determines the appropriate one of the plurality of refrigerating specifications based on the set internal temperature (see column 6 lines 16-24).

Regarding claim 34, Lee et al discloses a signal recording section (40, see column 6 line 11) provided with a heat insulating housing for storing an identification signal for selecting the appropriate one of the plurality of refrigerating specifications, and

a reading section (31, see column 6 line 12) capable of reading the identification signal of the signal recording section and communicating the identification signal to the control means (see column 6 lines 13-15).

Regarding claim 35, Lee et al discloses an information recording section storing supplemental information (31, 16, see column 6 lines 29-31 and 16-24) and an information conveying means for reading and communicating the supplementary information to the control means, and the supplementary information includes at least one of a size of the heat insulating housing or a heat invasion amount characteristic, as the temperature change of the interior space over time is a heat invasion amount characteristic (see column 6 lines 16-24).

Regarding claim 40, Lee et al discloses the plurality of refrigerating specifications to include a refrigerating specification for refrigeration and a refrigerating specification for freezing (see column 5 line 51).

Response to Arguments

5. Applicant's arguments with respect to claims 28-40 have been considered but are moot in view of the new ground(s) of rejection.
6. Applicant's arguments filed 2/12/2009 have been fully considered but they are not persuasive. To the extent to which the arguments made are applicable to new claims 28-40, they are not persuasive, as the controller of Lee cannot store data in order to operate in various modes without some form of data storage location. Additionally, regarding cancelled claim 18 and new claim 31, there is no reason for an identifying switch not to be both a setting means and an identification means. The action

of a single item for two purposes does not negate the second purpose's existence. Regarding cancelled claim 20 and new claim 33, the argument is made that internal temperature is not used in Lee to determine which specification or operating mode is to be used; however, this is clearly overcome by the inclusion of the pull-down cooling of Viegas.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Carapico, Jr. (US Patent No. 3,444,921) and King et al (US Patent No. 4,485,633) both make mention of rapid or pull-down cooling. Campbell et al (US Patent No. 5,289,692) discloses the use of pull down cooling upon start up of a system, followed by a more normal operation. And Kenyon et al (US Patent No. 5,477,701) discloses the use of pull down cooling implemented when refrigerant temperature is above a preset threshold, as does Zhang et al (US Patent Application Publication No. 2003/0024266).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEXIS K. COX whose telephone number is (571)270-5530. The examiner can normally be reached on Monday through Thursday 8:00a.m. to 5:30p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Jules can be reached on 571-272-6681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/AKC/

/Frantz F. Jules/
Supervisory Patent Examiner, Art Unit 3744